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1634

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Total Number of Pages in This Submission

Application Number	08/887,505
Filing Date	07/02/1997
First Named Inventor	Kilkuskie, et. al.
Art Unit	1634
Examiner Name	D. Johannsen
Attorney Docket Number	47508-250US3 HYZ-040 CIP

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance communication to Group
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<input type="checkbox"/> Response to Missing Parts/ Incomplete Application	Remarks	
<input type="checkbox"/> <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	1. PTO Form 1449 (2 pgs.) 2. 41 Publications	

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Ann-Louise Kerner, Ph.D.
Signature	
Date	2/3/04

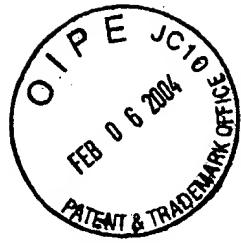
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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Kilkuskie, et al.
Serial No.: 08/887,505 Examiner: D. Johannsen
Filed: July 2, 1997 Group Art Unit: 1634
For: OLIGONUCLEOTIDES SPECIFIC FOR HEPATITIS C VIRUS
Atty. Docket No.: 47508.250US3 (HYZ-040 CIP)

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P.O. Box 1450
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INFORMATION DISCLOSURE STATEMENT

Sir:

Applicants and their legal representatives hereby make of record on the attached Form PTO-1449 the following publications which are known to them and considered warranting disclosure under 37 C.F.R. §1.56 and 1.97-98.

Copies of the publications listed on the attached Form PTO-1449 are submitted herewith. It is respectfully requested that the Examiner initial and return a copy of the subject Form PTO-1449 with the next Patent Office communication.

The following references were cited in the Examples section of the patent application. Copies of these references not already cited above are not included with this Information Disclosure Statement, but can be furnished upon request.

PUBLICATIONS

Sambrook, et al., (1989) *Molecular Cloning, A Laboratory Manual* (2nd ed.) Col Spring harbor Laboratory Press, pp. 16.30-16.40

Kato, et al, (1990) *Proc. Natl. Acad. Sci. (USA)* Vol. 87, pg. 9524

Lautenberger (1991) *Biotechniques*, Vol. 10, pgs. 778-780

Beaucage (1993) *Meth. Mol. Biol.* Vol. 20, pgs. 33-61

Hogrefe, et al., (1993) *Methods in Molecular Biology*, Vol. 20: "Protocols for Oligonucleotides and Analogs" (Agrawal, ed.) (Human Press Inc., Totowa, NJ)

Hogrefe et al., (1993) *Nucleic Acids Research* Vol. 21, pgs. 2031-2038

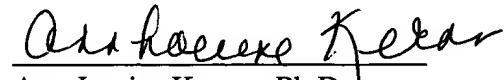
Uhlmann, et al., (1990) *Chem. Rev.*, Vol. 90, pgs. 543-584.

The submission of these publications does not constitute a representation by the Applicants that a search has been made or that no better art exists and does not constitute an admission that the listed publications are material or constitute "prior art." Applicants reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed publications, should one or more of the publications be applied against the claims of the present application.

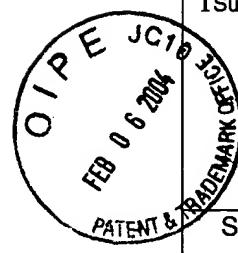
As the Information Disclosure Statement is being filed prior to the mailing date of the first Office Action on the merits, no fee is believed to be due. However, in the event a fee is due, please charge any fee deficiency or credit any overpayment to Deposit Account No. 08-0219.

Respectfully submitted,

Dated: February 3, 2004


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1 Subt. For, PTO-1449

INFORMATION DISCLOSURE
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Sheet

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OF

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Docket Number 47508.250US3 HYZ-040 CIP	Application Number 08/887,505
Applicant Kilkuskie, et al.	
Filing Date July 2, 1997	Group Art Unit 1634

U.S. Patent Documents

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,071,693	6/2000	Cha, et al	435	6	
	5,866,336	2/2/99	Nazarenko, et al.	435	6	
	5,846,704	12/8/98	Maertens, et al.	435	5	
	5,527,899	6/18/96	Froehler	536	25.3	
	5,424,413	6/13/95	Hogan, et al.	536	24.31	

Foreign Patent Documents

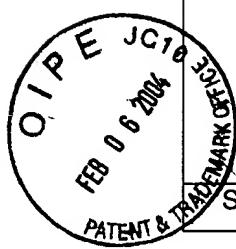
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	0 388 232	3/16/90	EP	C12N	15/51		
	0 469 348	7/9/91	EP	C12N	15/51		
	0 518 313	6/11/92	EP	C12N	15/51		
	0 532 258	9/8/92	EP	C12Q	1/70		
	0 554 624	12/24/92	EP	C07K	15/00		
	0 633 321	6/13/94	EP	C12Q	1/70		
	2,104,649	8/23/93	Canada				
	92/19743	5/8/92	WO				
	92/02642	8/12/91	WO				
	94/01550	7/2/93	WO				
	94/08002	9/28/93	WO				
	94/05813	9/10/93	WO				
	95/01442	6/28/94	WO				
	96/35706	5/10/96	WO				
	98/40479	2/12/98	WO				

Other Documents (Including Author, Title, Date Pertinent Pages, Etc.)

A1	Bukh, Jens, et al. "Sequence analysis of the 5' noncoding region of hepatitis C virus," 1992, Biochemistry, Vol. 89, pgs. 4942-4946
A2	Fuchs, et al, "Characterization of nucleotide sequences from European hepatitis C virus isolates Gene," 1991, Vol. 103, pgs. 163-169
A3	Hotta, Hak, et al, "Subtype Analysis of Hepatitis C Virus in Indonesia on the Basis of NS5b Region Sequences," 1994, J. Clinical Microbiology, Vol. 32, pgs. 3049-3051
A4	Gura, "Antisense Has Growing Pains," 1995, Science, Vol. 270, pgs. 575-577
A5	James, W., "Towards gene-inhibition therapy: a review of progress and prospects in the field of antiviral antisense nucleic acids and ribozymes," 1991, Antiviral Chem. & Chemotherapy, Vol. 2, pgs. 191-214
A6	Martell, Maria, et al., "Dynamic Behavior of Hepatitis C Virus Quasispecies in Patients Undergoing Orthotopic Liver Transplantation, 1994, J. Virolog, Vol. 68, pgs. 3425-3436

EXAMINER _____ DATE CONSIDERED _____

EXAMINER: Initial if citation is considered, whether or not citation is in conformance with MPEP § 609: Draw Line through citation if not conformance and not considered. Include copy with next communication to applicant.



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INFORMATION DISCLOSURE
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Sheet

2

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2

Docket Number 47508.250US3 HYZ-040 CIP	Application Number 08/887,505
Applicant Kilkuskie, et al.	
Filing Date July 2, 1997	Group Art Unit 1634

A7	Monia, Brett P., et al, "Selective Inhibition of Mutant Ha-ras mRNA Expression by Antisense Oligonucleotides," 1992, J. Bio. Chem., Vol. 267, pgs. 19954-19962
A8	Milligan, John F., et al., "Current Concepts in Antisense Drug Design," 1993, J. Med. Chem., Vol. 36, pgs. 1923-1937
A9	Salunkhe, Manikrao et al., "Control of Folding and Binding of Oligonucleotides by Use of a Nonnucleotide Linker," 1992, J. Am. Chem. Soc., Vol. 114, pgs. 8768-8772
A10	Simmonds, P., et al., "Sequence variability in the 5' non-coding region of hepatitis C virus: identification of a new virus type and restrictions on sequence diversity," 1993, J. Gen. Virology, Vol. 74, pgs.661-667
A11	Stein, A., et al., "Antisense Oligonucleotides as Therapeutic Agents – Is the Bullet Really Magical?" 1993, Science, Vol. 261, pgs. 1004-1012
A12	Stratagene 1988 Catalog
A13	Stuyver, Lieven, et al., "Typing of Hepatitis C virus isolates and characterization of new subtypes using a line probe assay," 1993, J Gen. Virology, Vol. 74, pgs. 1093-1102
A14	Stuyver, Lieven, et al., "Classification of hepatitis C viruses based on phylogenetic analysis of the envelope 1 and nonstructural 5B regions and identification of five additional subtypes," 1994, BioChemistry, Vol. 91, pgs.10134-10138
A15	Tseng, B.Y., et al., "Antisense oligonucleotide technology in the development of cancer therapeutics," 1994, Cancer Gene Therapy, Vol. 1 pgs. 65-71
A16	Uhlmann, E., et al., 1990, Antisense Oligonucleotides: A New Therapeutic Principle, Chem. Reviews, Vol. 90, pgs. 543-584
A17	Wakita, et al., 1994, "Specific Inhibition of Hepatitis C Virus Expression by Antisense Oligodeoxynucleotides," J. Bio. Chem Vol. 269, pgs. 14205-14210
A18	Wang, et al., 1994, "A Conserved Helical Element is Essential for Internal Initiation of Translation of Hepatitis C Virus RNA," J. Virol., Vol. 68, pgs. 7301-7307
A19	Westermann, P. et al., "Inhibition of expression of SV40 virus large T-antigen by antisense oligodeoxyribonucleotides," 1989, Biomed. Biochim. Acta, Vol. 48, pgs. 85-93
A20	Yoo, Byoung J. et al., 1995, "Transfection of a Differentiated Human Hepatoma Cell Line (Huh7) with In Vitro-Transcribed Hepatitis C Virus (HCV) RNA and Establishment of a Long-Term Culture Persistently Infected with HCV," J. Virol., Vol. 69, pgs. 32-38
A21	Yoo, Byoung, J. et al., 1992, "End-Dependent Translation Initiation of Hepatitis C Viral RNA and the Presence of Putative Positive and Negative Translational Control Elements with the 5' Untranslated Region," J. Virol. Vol. 191, pgs. 889-899

EXAMINER	DATE CONSIDERED
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